Manitoba

Fire Loss Report 1987

Labour

Office of the
Fire Commissioner

89-03403/

Manitoba

Fire Loss Report 1987

Labour

Office of the
Fire Commissioner

Table of Contents

TITLE	PAGE
Services Offered by the Office of the Fire Commissioner	5
Review of 1987	5
Section I Fire Loss Statistics	
Chart 1 Comparative Chart of the Total Number of Fires in Manitoba, 1983 - 1987	6
Chart 2 Comparative Chart of the Total Dollar Loss in Manitoba, 1983 - 1987	7
Table 1 Distribution of Fires by Amount of Dollar Loss, 1987	8
Table 2 Fires and Fire Losses by Month, 1987	8
Chart 3 Number of Fires by Day of Week, 1987	9
Chart 4 Dollar Loss by Day of Week, 1987	10
Chart 5 Number of Fires by Hour of Day, 1987	11
Chart 6 Dollar Loss by Hour of Day, 1987	12
Table 3 Number of Fires Resulting in Death and Details of Fatalities, 1978 - 1987	13
Table 4 Breakdown of Fire Fatalities by Property Classification, 1987	13
Table 5 Fire Fatalities by Age and Sex, 1987	14
Table 6 Number of Fire Injuries, 1987	14
Table 7 Fire Injuries by Age and Sex, 1987	14
Chart 7 Fire Fatalities by Hour of Day, 1987	15
Chart 8 Fire Injuries by Hour of Day, 1987	16
Table 8 Breakdown of Fire Fatalities by Act or Omission, 1987	17
Table 9 Circumstances Contributing to Fire Casualties, 1987	17
Chart 9 Comparative Chart of the Total Number of Fires in Manitoba, 1983 - 1987	19
Table 10 Losses by Major Property Classifications, 1987	20
Table 10(a) Breakdown of Area of Origin by Property Classification, 1987	23
Table 11 Breakdown of Act or Omission by Property Classification, 1987	25
Table 12 Breakdown of Source of Heat of Ignition by Property Classification, 1987	28
Table 13 Breakdown of Fuel or Energy by Property Classification, 1987	31
Table 14 Breakdown of Material First Ignited by Property Classification, 1987	34
Table 15 Number of Fires and Amount of Fire Loss by Community or Area, 1987	37
Table 16 Fire Losses Exceeding $500,000., 1987	42
Section II Investigations	
Table 17 Investigations Conducted by Local Police, 1987	43
Table 18 Findings of Investigations Conducted by Local Police, 1987	43
Section III Manitoba Fire Chiefs	
Manitoba Fire Chiefs List	44

Office of the Fire Commissioner

The Office of the Fire Commissioner is charged with the responsibility to promote and encourage the safety of persons, to reduce life and property loss from fires, dangerous goods, structural and mechanical matters and related hazards.

Services Offered:

— Investigate fires to determine the cause, origin and circumstances

— Provide emergency services training for firefighters, building officials and emergency services personnel on fire fighting, fire prevention, handling of dangerous goods, rescue techniques and building safety

— Promote public education in fire prevention practices and safety measures

— Provide consulting services to fire departments and other agencies to evaluate and recommend fire protection equipment

— Inspect buildings to ensure they meet life safety requirements contained in both the Fire and Building Codes

— Review building plans and advise building officials on the requirements of the Manitoba Building Code

— Compile statistics and information about fires and other life safety hazards

Review of 1987

During 1987, Manitoba recorded 5,987 fires, resulting in $49.7 million in property damage. This represents an increase of 119 fires or two percent over the 5,868 fires reported in 1986. The total property loss for 1987 decreased by $4.7 million or nine percent compared to 1986.

The increase in the number of fires, is mainly attributed to the 2,121 outdoor property fires. Severe drought conditions during the spring required a number of Mutual Aid Districts to be activated to control wild fires.

Twenty-six people died in fires during 1987. This is the lowest number recorded in 25 years. Fifteen men, three women and eight children lost their lives in 23 fires. Alcohol was involved in one third of all fire deaths. The number of injuries increased by 11% to 296 from the 268 reported in 1986.

Residential occupancies continue to be a major concern, during the year 21 or 81% of all fatalities occurred in the home. There were 1,940 reported fires in residential properties representing 32% of all fires in 1987 and a monetary loss of almost $21 million or 42%. One and two family dwellings accounted for 1,467 or the majority of these fires and resulted in a loss of $13.2 million for the year.

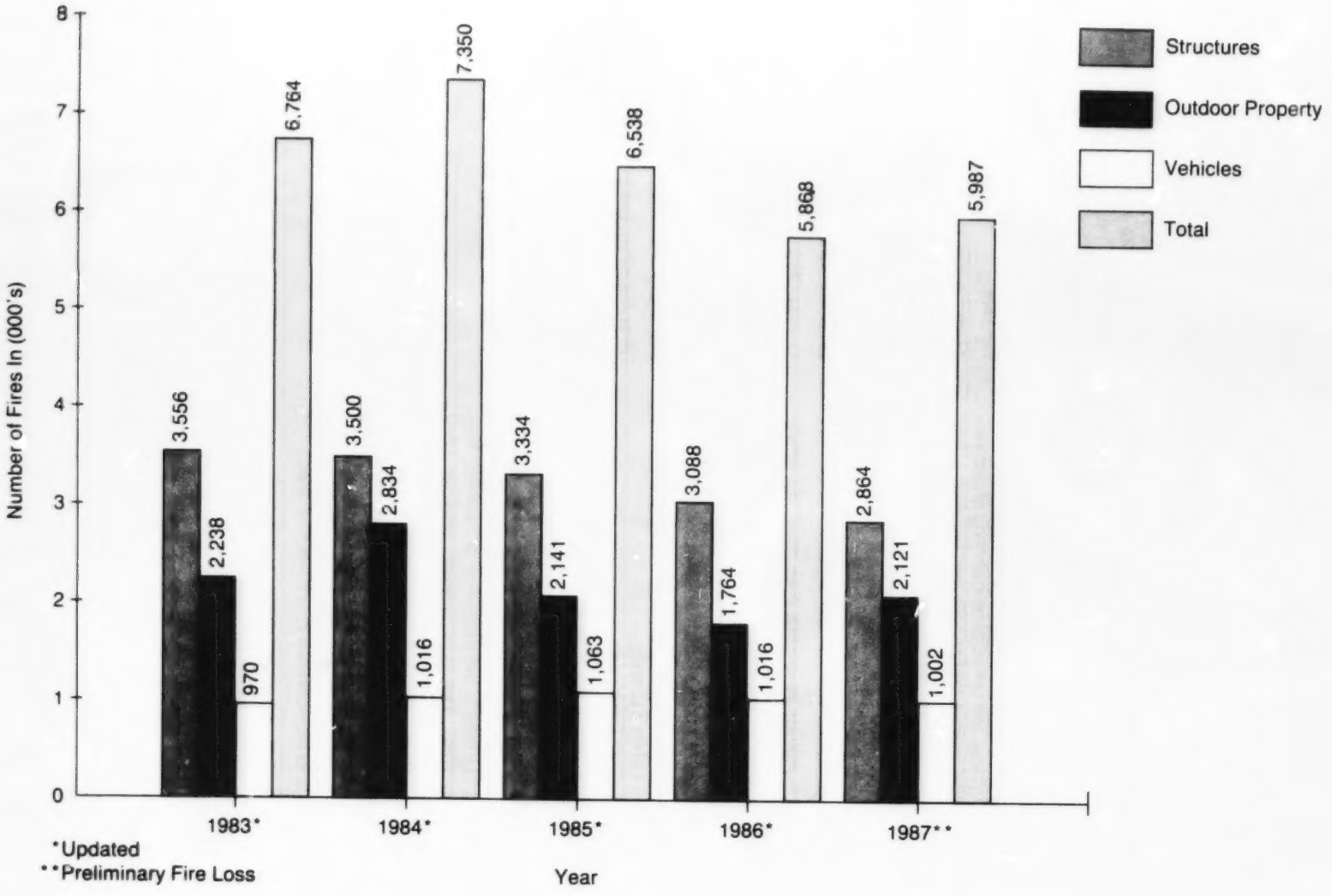
There were 12 fires where the losses exceeded $500,000, less than one quarter of one percent of all fire incidents. They were responsible for a $15.9 million in damage or nearly one third of all property damage for the year. Five of these major fires were caused by arson or suspected arson and incurred $5.9 million in property damage.

During 1987, police authorities in Manitoba conducted 520 fire investigations. Accidental fires represented 50% or 263 of the total number of investigations conducted with incendiary, vandalism and undetermined-suspicious accounting for 26% or 136. Undetermined accidental causes followed closely with 119 investigations and two incidents are still under investigation.

In concluding, the Fire Commissioner's Office takes this opportunity to thank the various organizations and agencies who assisted the office in carrying out our responsibilities. We look forward to continuing the excellent working relationship with the fire and police services as well as the members of the insurance industry.

Chart No. 1

Comparative Chart of the Total Number of Fires in Manitoba, 1983 - 1987

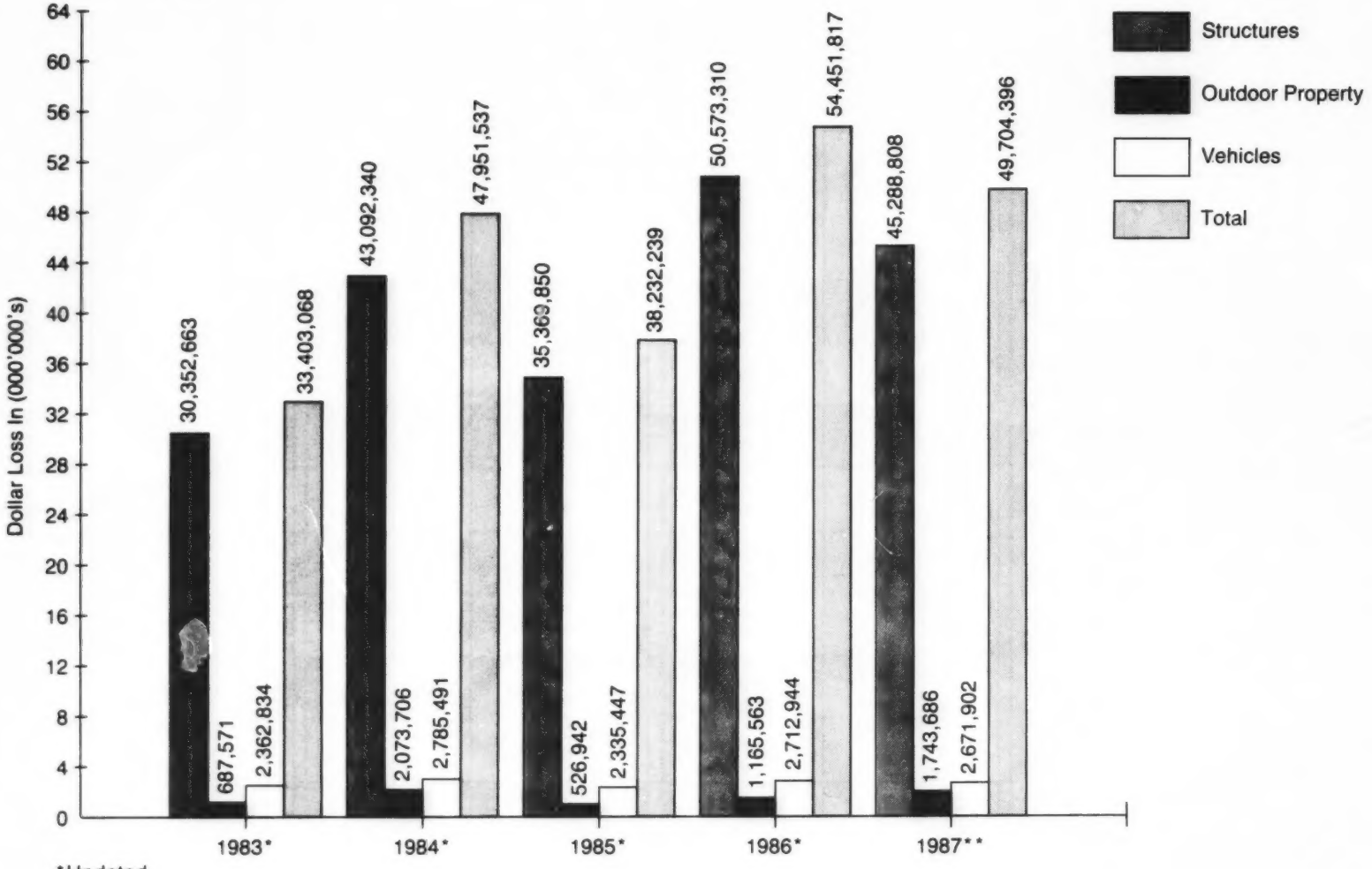


*Updated

**Preliminary Fire Loss

Chart No. 2

Comparative Chart of the Total Dollar Loss in Manitoba, 1983 - 1987



*Updated

**Preliminary Fire Loss

Table No. 1

Distribution of Fires by Amount of Dollar Loss, 1987

Amount of Dollar Loss Minimum	Maximum	Number of Fires	Percentage of Total	Dollar Loss	Percentage of Total
Less than	$ 100.00	2,843	47.48%	$ 7,632	.02%
100.00 to	999.99	1,126	18.81	479,252	.96
1,000.00 to	9,999.99	1,342	22.42	4,028,243	8.10
10,000.00 to	49,999.99	501	8.37	11,682,347	23.50
50,000.00 to	249,999.99	151	2.52	13,501,220	27.16
250,000.00 and greater		24	.40	20,005,702	40.26
Total		**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 2

Fires and Fire Losses by Month, 1987

Month	Number of Fires	Percentage of Total	Dollar Loss	Percentage of Total
January	434	7.25%	$ 5,344,257	10.75%
February	349	5.83	2,459,489	4.95
March	360	6.01	2,308,019	4.64
April	782	13.06	5,398,137	10.86
May	782	13.06	7,565,806	15.22
June	506	8.45	3,427,205	6.90
July	361	6.03	2,345,960	4.72
August	448	7.48	2,166,310	4.36
September	522	8.72	3,384,391	6.81
October	513	8.57	3,146,353	6.33
November	542	9.06	3,450,267	6.94
December	388	6.48	8,708,172	17.52
Total	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Chart No. 3

Number of Fires by Day of Week, 1987

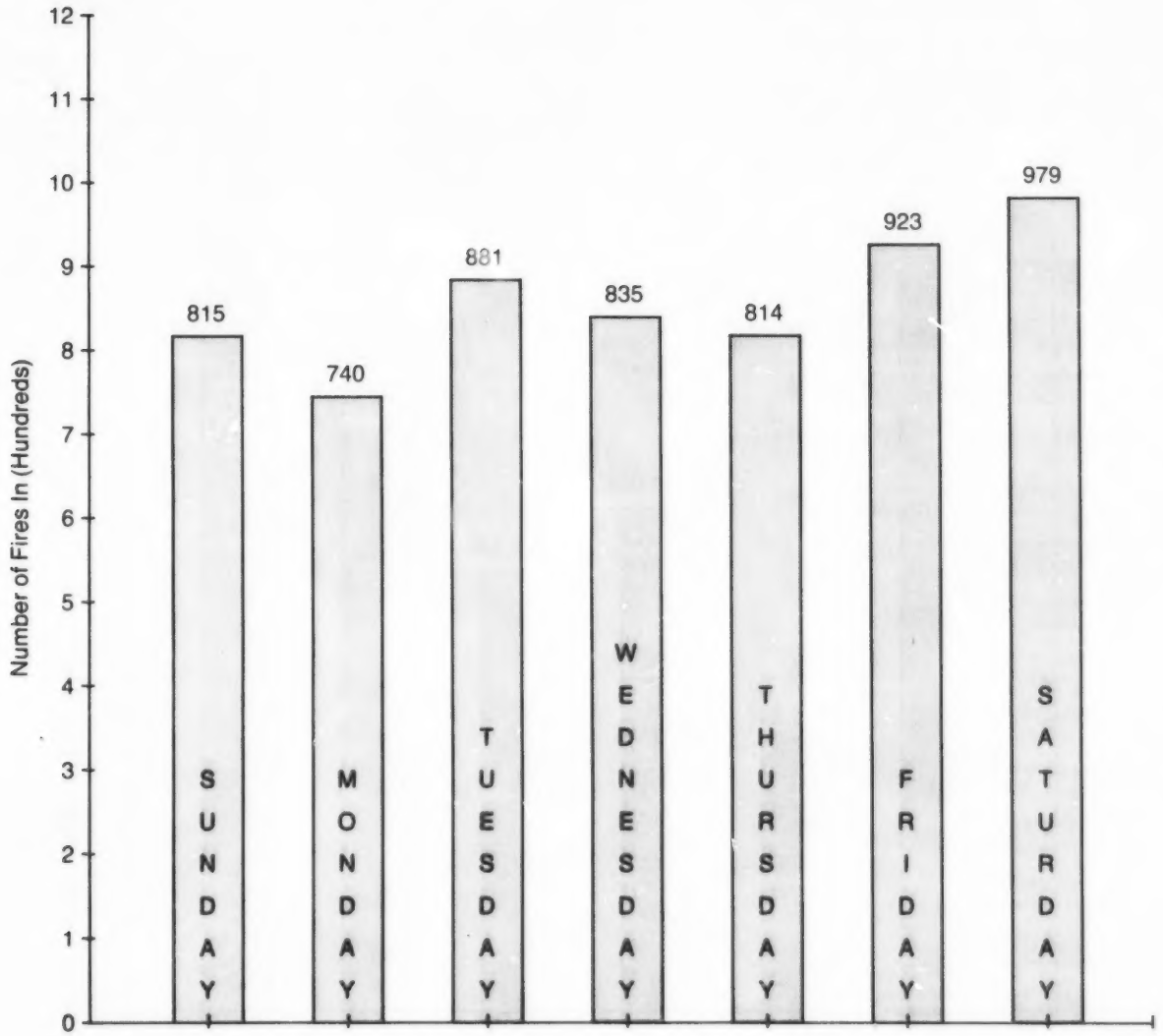


Chart No. 4

Dollar Loss by Day of Week, 1987

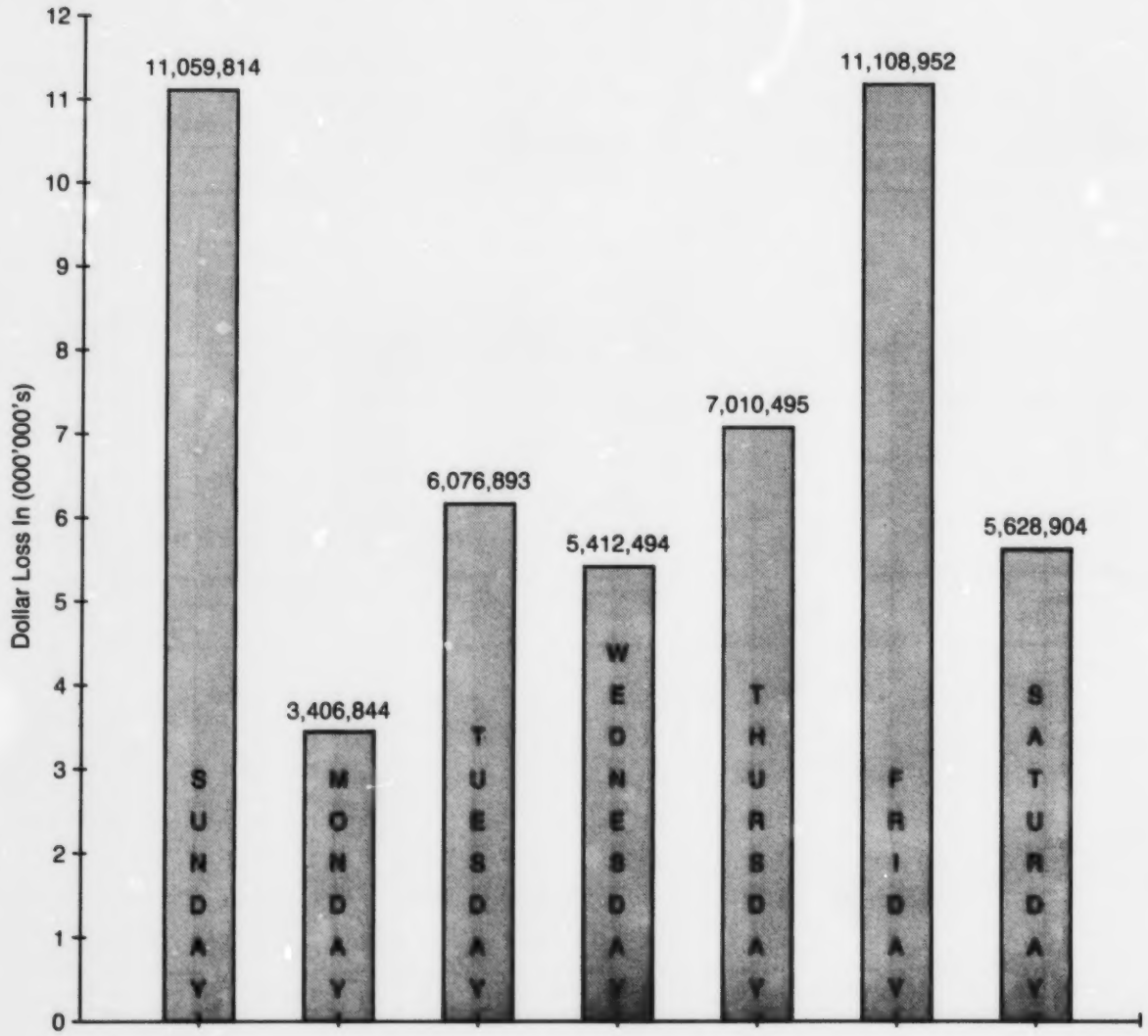
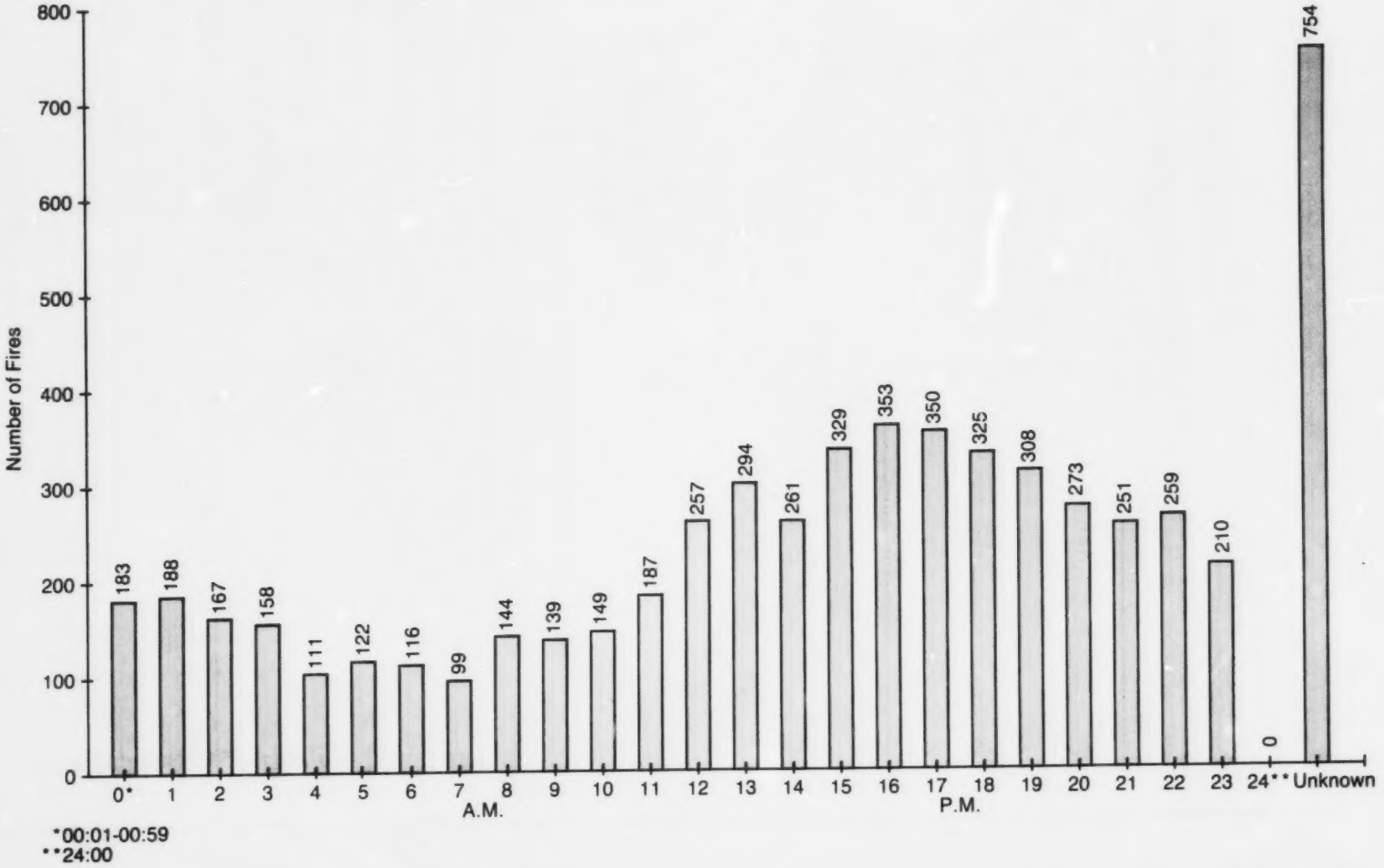


Chart No. 5

Number of Fires by Hour of Day, 1987



*00:01-00:59
**24:00

Chart No. 6

Dollar Loss by Hour of Day, 1987

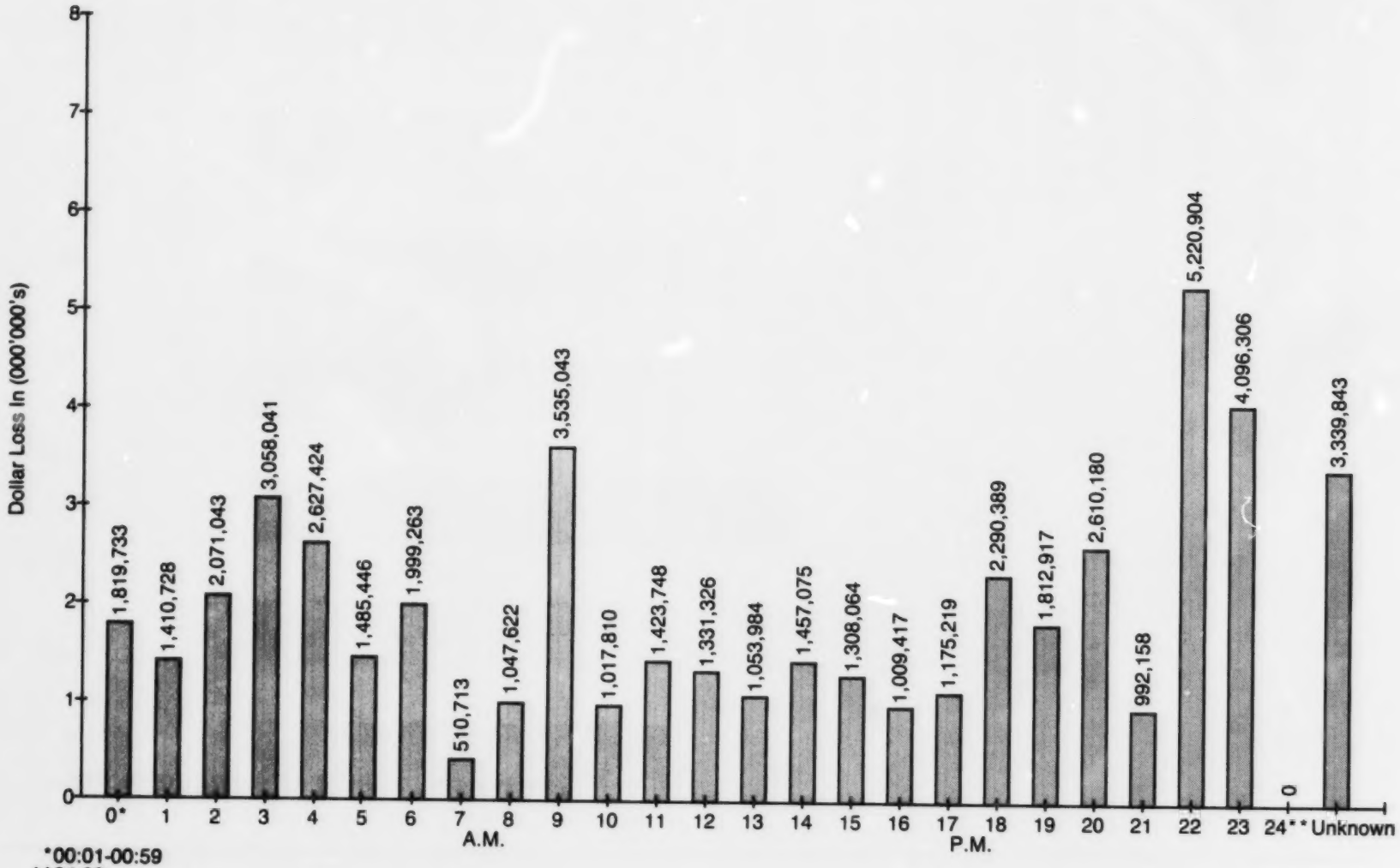


Table No. 3

Number of Fires Resulting in Death and Details of Fatalities, 1978-1987

Year	Number of Fatal Fires	Men	Women	Children[1]	Total Fatalities
1978	39	31	8	13	52
1979	32	24	6	14	44
1980	27	13	11	12	36
1981	36	25	15	12	52
1982	30	15	13	11	39
1983	36	26	9	15	50
1984	22	13	9	11	33
1985	26	22	8	8	38
1986	25	13	13	7	33
1987	23	15	3	8	26

[1]*Fifteen years of age and under*

Table No. 4

Breakdown of Fire Fatalities by Property Classification, 1987

Property Classification	Men	Women	Children	Total	Percent
Residential:					
One and Two Family Residences, Duplex	7	2	7	16	61.54%
Apartment, Condominium	1	1	1	3	11.53
Rooming House	1	—	—	1	3.85
Mobile Home	1	—	—	1	3.85
Motor Vehicle	3	—	—	3	11.53
Outdoor Property	1	—	—	1	3.85
Unclassified	1	—	—	1	3.85
Total	**15**	**3**	**8**	**26**	**100.00%**

Table No. 5

Fire Fatalities by Age and Sex, 1987

	Five Years and Under	6-15	16-25	26-35	36-45	46-55	56-65	Over 65	Unknown	Total
Male	4	—	4	5	2	—	3	1	—	19
Female	4	—	1	—	2	—	—	—	—	7
Total	8	—	5	5	4	—	3	1	—	26

Table No. 6

Number of Fire Injuries, 1987

	Men	Women	Children	Total
Injuries	227	51	18	296

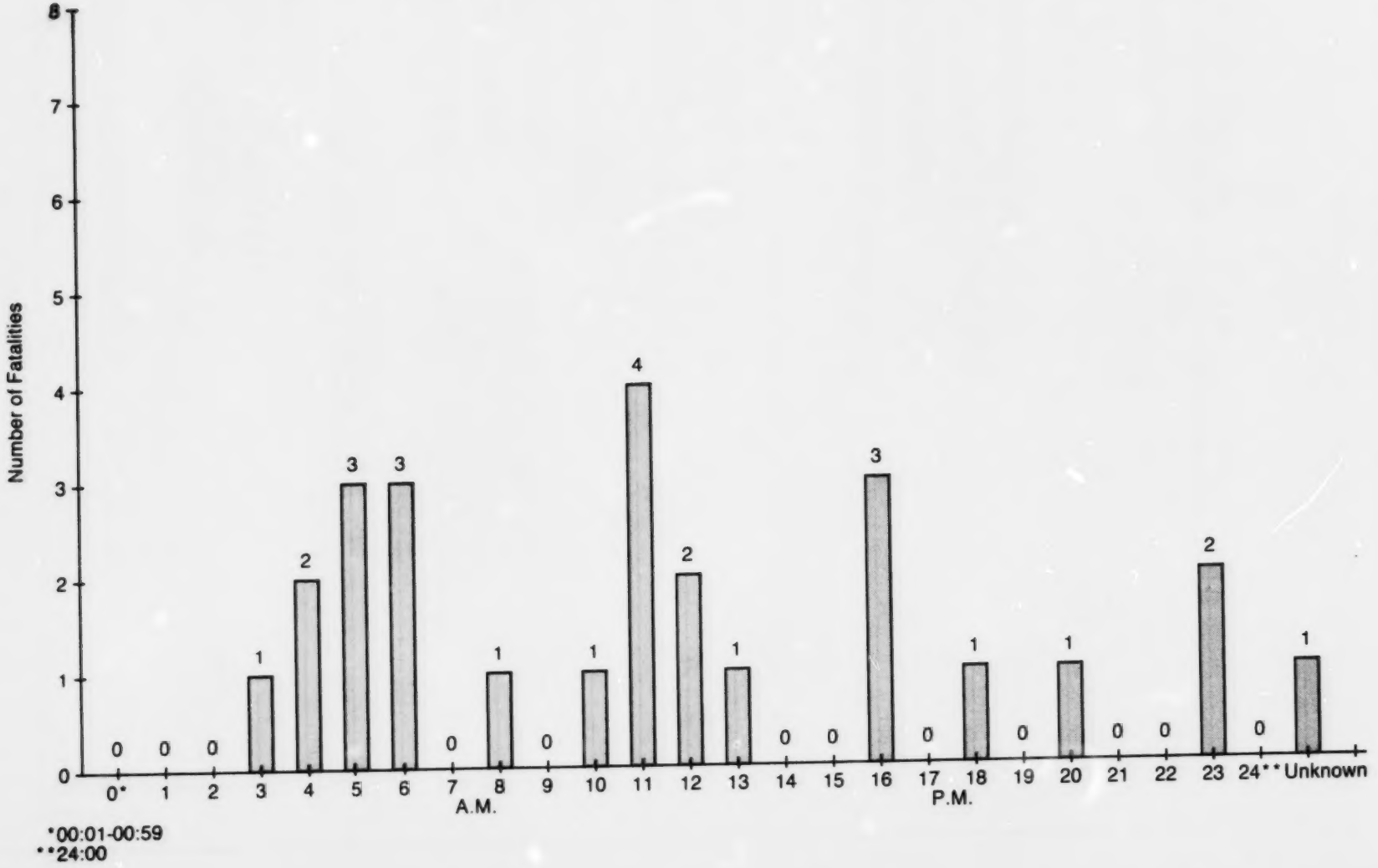
Table No. 7

Fire Injuries by Age and Sex, 1987

	Five Years and Under	6-15	16-25	26-35	36-45	46-55	56-65	Over 65	Unknown	Total
Male	4	4	33	75	49	38	9	6	17	235
Female	7	3	8	15	9	1	4	10	4	61
Total	**11**	**7**	**41**	**90**	**58**	**39**	**13**	**16**	**21**	**296**

Chart No. 7

Fire Fatalities by Hour of Day, 1987



*00:01-00:59
**24:00

Chart No. 8

Fire Injuries by Hour of Day, 1987

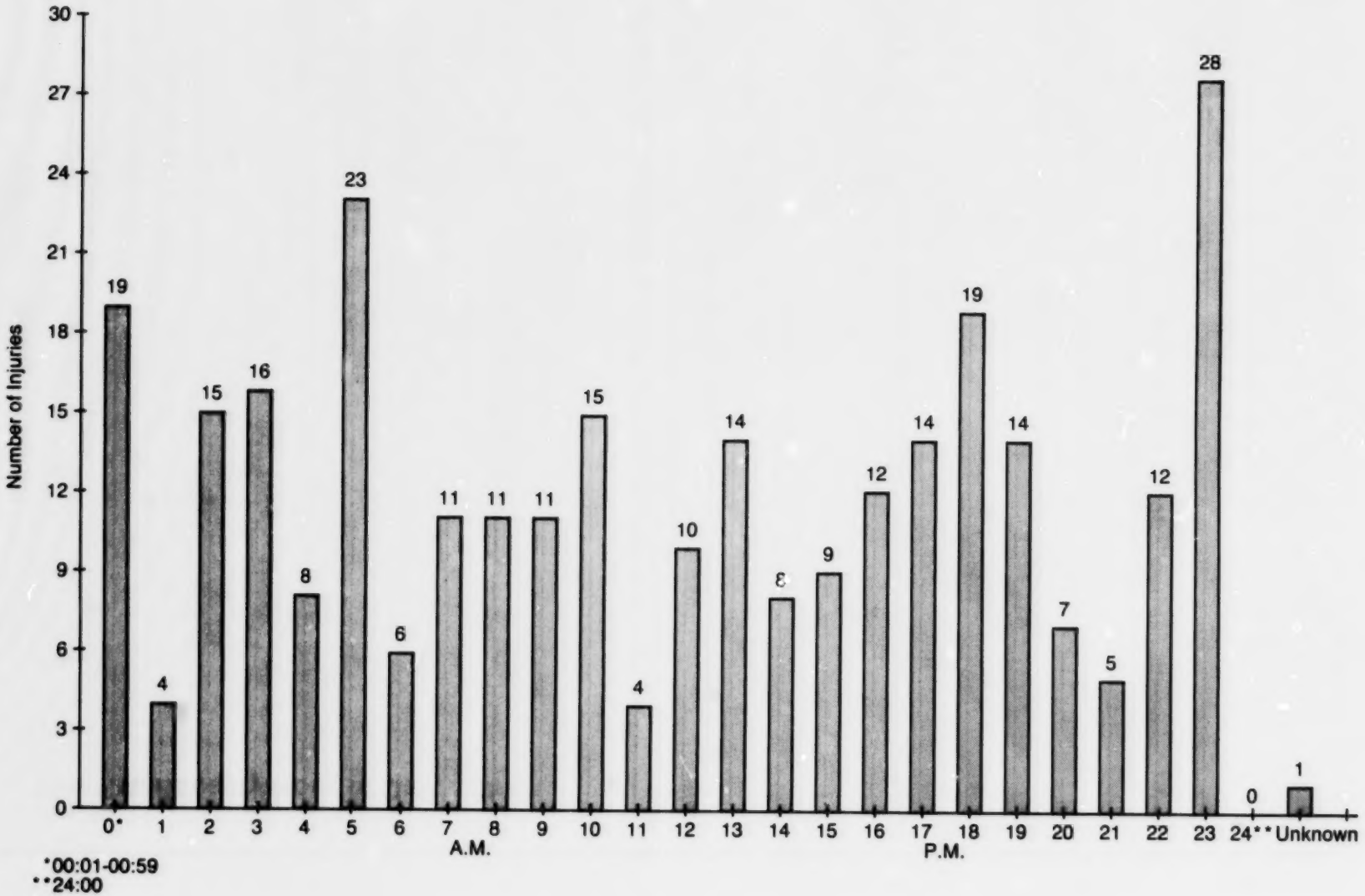


Table No. 8

Breakdown of Fire Fatalities by Act or Omission, 1987

Act or Omission	Men	Women	Children	Total	Percent
Incendiary or Set Fire	1	—	—	1	3.85%
Misuse of Source of Ignition	3	—	4	7	26.92
Misuse of Material Ignited	—	—	2	2	7.69
Mechanical, Electrical Failure Malfunction	2	—	—	2	7.69
Construction, Design or Installation Deficiency	—	—	—	—	—
Misuse of Equipment	—	—	—	—	—
Human Failing	3	1	—	4	15.38
Vehicle Accident	1	—	—	1	3.85
Undetermined	5	2	2	9	34.62
Total	**15**	**3**	**8**	**26**	**100.00%**

Table No. 9

Circumstances Contributing to Fire Casualties, 1987

Condition of Casualty at Time of Fire	Fatalities	Injuries
Not applicable	1	199
Asleep at time of fire	3	24
Bedridden or other physical or mental handicap	1	2
Impairment by Alcohol	7	9
Impairment by Drugs	1	—
Under restraint or detention	—	1
Too young to act	5	7
Senile	—	—
Left unattended (children)	2	1
Unclassified or unknown	6	53
	26	**296**

Action of Casualty at Time of Fire	Fatalities	Injuries
Not applicable	7	168
Injured while attempting to escape	1	17
Over-exertion, heart attack, etc.	—	2
Voluntarily entered or remained for rescue purposes	—	7
Voluntarily entered or remained for fire fighting	—	35
Voluntarily entered or remained to save personal property	—	6
Loss of judgement; panic	2	5
Received delayed warning	1	5
Parents or guardian injured	—	—
Unclassified or unknown	15	51
	26	**296**

Table No. 9 (continued)

Circumstances Contributing to Fire Casualties, 1987

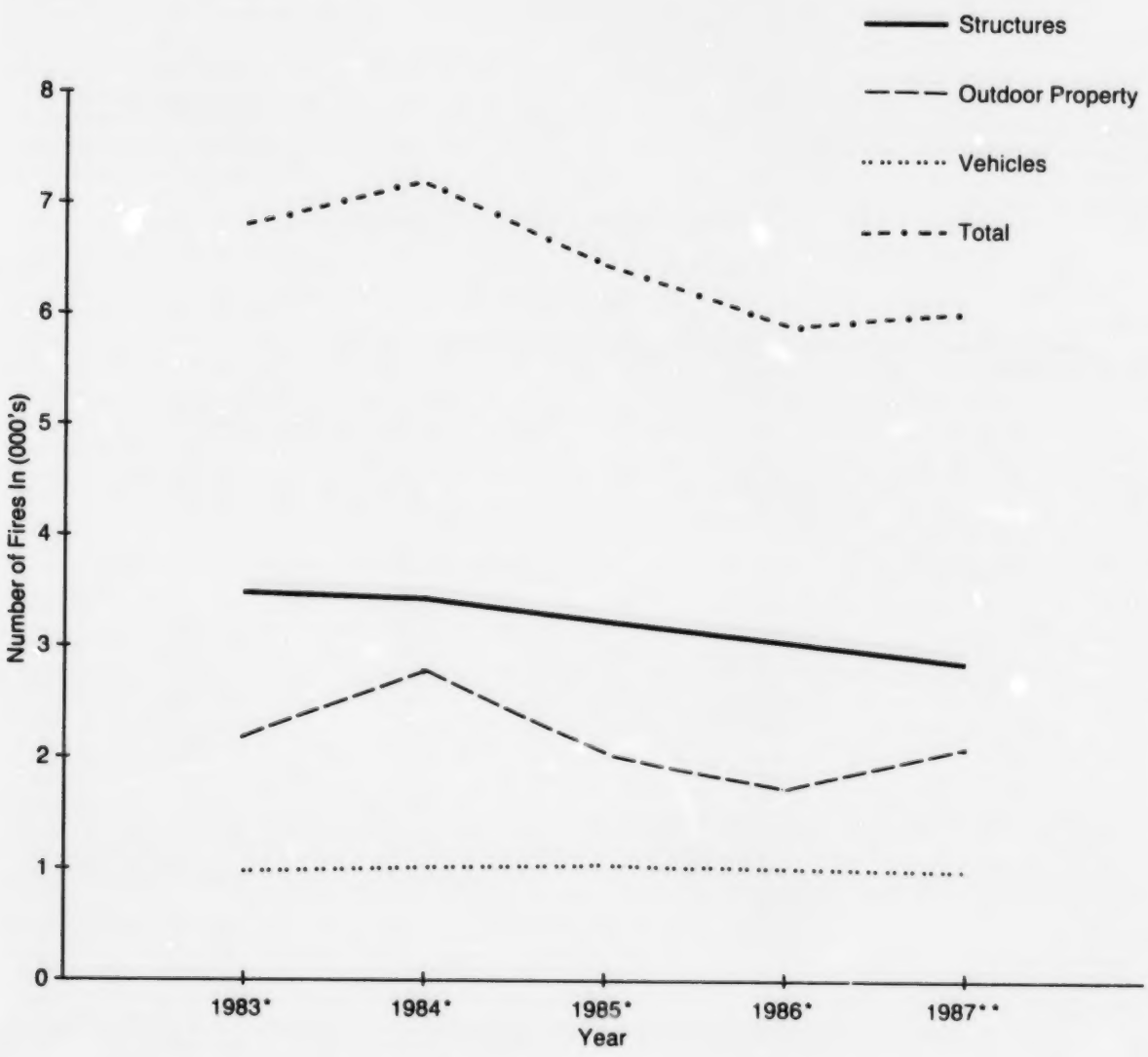
Ignition of Clothing at Time of Fire	Fatalities	Injuries
Not applicable	8	229
Outer clothing	1	7
Sleepwear	—	3
Underclothing	—	2
Costume	—	2
Bedding or bed linen; mattress or pillow	5	11
Upholstered furniture	3	6
Unclassified or unknown	9	36
	26	**296**

Type of Fabric or Material Ignited	Fatalities	Injuries
Not applicable	7	220
Cotton	—	9
Wool	—	—
Other natural fibre	3	—
Rayon (viscose)	—	—
Other synthetic fibre	1	3
Mixture fibres	3	10
Rubber	—	—
Plastic foam	—	—
Unclassified or unknown	12	54
	26	**296**

Cause of Failure to Escape	Fatalities	Injuries
Not applicable	4	226
Trapped by: rapid spread of fire/smoke through vertical openings; stairways, elevators	1	3
Trapped by: rapid spread of fire/smoke through horizontal openings	3	6
High flame spread of combustible interior finish of walls, ceilings, or floors	2	2
Building collapse	—	2
Falling debris	—	1
Explosion	—	6
Exit blocked or obstructed by fire	1	2
Outdoor fires, includes forest and bush	1	—
Unclassified or unknown	14	48
	26	**296**

Chart No. 9

Comparative Chart of the Total Number of Fires in Manitoba, 1983-1987



*Updated
**Preliminary Fire Loss

Table No. 10

Losses by Major Property Classifications, 1987

Property Classification	Number of Fires	Percent	Amount	Percent
ASSEMBLY				
Theatre, Studio, Auditorium	—	—%	$ —	—%
Amusement and Recreation Place	21	.35	964,526	1.94
School, College, University	22	.37	589,051	1.19
Church, Court Room, Funeral Parlour	14	.23	4,312,554	8.68
Social, Sport Club	15	.25	568,438	1.14
Library, Museum	2	.03	300	—
Eating Establishment	25	.42	350,616	.71
Passenger Terminal, Station	—	—	—	—
Miscellaneous	—	—	—	—
Sub-total	**99**	**1.65**	**6,785,485**	**13.66**
INSTITUTIONAL				
Prison, Jail, Reformatory	4	.07	5,200	.01
Home for the Aged	11	.18	7,015	.01
Children's Hospital	2	.03	300	—
Hospital, Sanitorium, Clinic	20	.33	11,371	.02
Miscellaneous	7	.12	3,700	.01
Sub-total	**44**	**.73**	**27,586**	**.05**
RESIDENTIAL				
Residential	1,467	24.50	13,236,582	26.63
Apartment	350	5.85	5,588,868	11.24
Rooming, Boarding House	24	.40	212,483	.43
Hotel	27	.45	815,887	1.64
Motor Hotel	7	.12	99,355	.20
Dormitory	15	.25	175,956	.35
Mobile Home	45	.75	821,953	1.65
Miscellaneous	5	.09	12,487	.03
Sub-total	**1,940**	**32.41**	**20,963,571**	**42.17**
BUSINESS AND PERSONAL SERVICES				
Office	19	.32	312,100	.63
Personal Service	2	.03	65,102	.13
Electronic Equipment	—	—	—	—
Miscellaneous	1	.02	73,181	.15
Sub-total	**22**	**.37**	**450,383**	**.91**

Table No. 10 (continued)

Losses by Major Property Classifications, 1987

Property Classification	Number of Fires	Percent	Amount	Percent
MERCANTILE				
Food, Beverage Sale	15	.25%	$ 1,898,877	3.82%
Textile, Wearing Apparel Sale	5	.08	951,009	1.91
Furniture, Appliance, Hardware Sale	4	.07	1,010	—
Books, Newspapers, Drugs, Specialties	7	.12	718,158	1.44
Recreation, Hobby Supplies	1	.02	23,016	.05
Repair Shop, Laundry, Dry Cleaner	3	.05	5,813	.01
Motor Vehicle, Boat, Sales and Service	24	.40	497,220	1.00
Department, Variety Store	3	.05	10,050	.02
Miscellaneous	3	.05	23,356	.05
Sub-total	**65**	**1.09**	**4,128,509**	**8.30**
INDUSTRIAL MANUFACTURING PROPERTIES				
Chemical, Petroleum, Paints, Plastics	5	.08	20,500	.04
Wood, Furniture, Paper Printing	21	.35	2,191,271	4.41
Metal, Metal Products, Electrical Appliances	19	.32	845,986	1.70
Food Processing	18	.30	1,268,546	2.55
Beverages, Tobacco, Soap, Margarine	—	—	—	—
Textiles	2	.03	35,000	.07
Footwear, Wearing Apparel	6	.10	41,014	.08
Vehicles and Related Equipment	4	.07	60,300	.12
Miscellaneous	4	.07	37,670	.08
Sub-total	**79**	**1.32**	**4,500,287**	**9.05**
INDUSTRIAL STORAGE PROPERTIES				
Agricultural Products	24	.40	291,716	.59
Textiles, Fibres, Clothing	—	—	—	—
Processed Food, Beverages	4	.07	16,700	.03
Flammable Liquids, Gasses, Petroleum	—	—	—	—
Wood Furniture, Paper and Products	3	.05	15,190	.03
Chemicals, Plastics, Paints	1	.02	32,737	.07
Metal Goods, Machinery, Electrical Appliances	5	.08	966,910	1.95
Vehicles	155	2.59	856,609	1.72
Miscellaneous	12	.20	1,671,548	3.36
Sub-total	**204**	**3.41**	**3,851,410**	**7.75**

Table No. 10 (continued)

Losses by Major Property Classifications, 1987

Property Classification	Number of Fires	Percent	Amount	Percent
SPECIAL PROPERTY-TRANSPORTATION EQUIPMENT				
Outdoor Property	2,116	35.34%	$ 1,593,686	3.21%
Pier, Wharf	5	.08	150,000	.30
Under Construction/Demolition: Vacant	105	1.75	1,136,637	2.29
Watercraft	13	.22	65,570	.13
Rail Transport Vehicle and Equipment	22	.37	309,600	.62
Ground Transport Vehicle	845	14.11	1,634,220	3.29
Aircraft	—	—	—	—
Special Vehicle	119	1.99	612,512	1.23
Miscellaneous	3	.05	50,000	.10
Sub-total	**3,228**	**53.91**	**5,552,225**	**11.17**
MISCELLANEOUS				
Laboratories	3	.05	—	—
Farm Facilities	168	2.81	2,764,983	5.56
Miscellaneous Outbuildings	84	1.40	375,378	.76
Utility	44	.73	267,290	.54
Cement, Glass, Pottery Manufacturing	—	—	—	—
Mining, Quarrying	1	.02	2,500	.01
Communications	1	.02	—	—
Nucleonics	—	—	—	—
Miscellaneous	5	.08	34,789	.07
Sub-total	**306**	**5.11**	**3,444,940**	**6.94**
Total	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 10(a)

Breakdown of Area of Origin by Property Classification, 1987

Area of Origin of Fire	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Means of Egress	18	18.18%	$ 51,205	.75%	1	2.27%	$ —	—%
Assembly, Sales Area	11	11.11	1,021,550	15.05	4	9.09	4,475	16.22
Function Area	30	30.31	1,203,278	17.73	34	77.28	22,711	82.33
Storage Area	12	12.12	257,809	3.80	—	—	—	—
Service Facilities	3	3.03	800	.01	2	4.55	400	1.45
Service and Equipment Area	6	6.06	11,252	.17	1	2.27	—	—
Structural Area	10	10.10	182,291	2.69	1	2.27	—	—
Vehicle Area	—	—	—	—	—	—	—	—
Outside Area	3	3.03	800	.01	—	—	—	—
Undetermined/Unclassified	6	6.06	4,056,500	59.79	1	2.27	—	—
Total	**99**	**100.00%**	**$ 6,785,485**	**100.00%**	**44**	**100.00%**	**$ 27,586**	**100.00%**

Table No. 10(b)

Breakdown of Area of Origin by Property Classification, 1987

Area of Origin of Fire	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Means of Egress	82	4.23%	$ 2,016,514	9.62%	3	13.64%	$ 350	.08%
Assembly, Sales Area	305	15.72	2,915,749	13.91	—	—	—	—
Function Area	987	50.87	7,032,800	33.54	8	36.36	68,852	15.29
Storage Area	114	5.88	1,390,014	6.63	6	27.27	171,600	38.10
Service Facilities	155	7.99	700,767	3.34	—	—	—	—
Service and Equipment Area	55	2.84	483,917	2.31	1	4.55	200	.04
Structural Area	99	5.10	3,311,387	15.80	2	9.09	136,000	30.20
Vehicle Area	—	—	—	—	—	—	—	—
Outside Area	70	3.61	1,412,853	6.74	—	—	—	—
Undetermined/Unclassified	73	3.76	1,699,570	8.11	2	9.09	73,381	16.29
Total	**1,940**	**100.00%**	**$20,963,571**	**100.00%**	**22**	**100.00%**	**$ 450,383**	**100.00%**

Table No. 10(c)

Breakdown of Area of Origin by Property Classification, 1987

Area of Origin of Fire	Mercantile				Industrial Manufacturing Properties			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Means of Egress	4	6.15%	$ 108,766	2.63%	1	1.27%	$ —	—%
Assembly, Sales Area	6	9.23	198,908	4.82	1	1.27	80,000	1.78
Function Area	15	23.08	241,521	5.85	29	36.70	280,141	6.22
Storage Area	7	10.77	266,051	6.44	8	10.13	664,400	14.76
Service Facilities	—	—	—	—	12	15.19	23,600	.52
Service and Equipment Area	14	21.54	247,548	6.00	18	22.78	2,785,760	61.91
Structural Area	6	9.23	229,045	5.55	5	6.33	341,286	7.58
Vehicle Area	2	3.08	16,500	.40	—	—	—	—
Outside Area	1	1.54	750,000	18.17	2	2.53	265,000	5.89
Undetermined/Unclassified	10	15.38	2,070,170	50.14	3	3.80	60,100	1.34
Total	**65**	**100.00%**	**$ 4,128,509**	**100.00%**	**79**	**100.00%**	**$ 4,500,287**	**100.00%**

Table No. 10(d)

Breakdown of Area of Origin by Property Classification, 1987

Area of Origin of Fire	Industrial Storage Properties No.	Percent	Amount	Percent	Special Property - Transportation Equipment No.	Percent	Amount	Percent
Means of Egress	2	.98%	$ 800	.02%	14	.43%	$ 136,200	2.45%
Assembly, Sales Area	—	—	—	—	10	.31	31,700	.57
Function Area	4	1.96	948,237	24.62	11	.34	164,000	2.95
Storage Area	164	80.40	1,127,781	29.28	16	.50	57,847	1.04
Service Facilities	1	.49	2,500	.06	1	.03	15,000	.27
Service and Equipment Area	6	2.94	1,518,048	39.42	2	.06	—	—
Structural Area	13	6.37	24,444	.63	15	.46	184,600	3.32
Vehicle Area	5	2.45	20,300	.53	987	30.58	2,551,333	45.96
Outside Area	5	2.45	132,300	3.44	2,133	66.08	1,877,021	33.81
Undetermined/Unclassified	4	1.96	77,000	2.00	39	1.21	534,524	9.63
Total	**204**	**100.00%**	**$ 3,851,410**	**100.00%**	**3,228**	**100.00%**	**$ 5,552,225**	**100.00%**

Table No. 10(e)

Breakdown of Area of Origin by Property Classification, 1987

Area of Origin of Fire	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Means of Egress	2	.65%	$ 250,000	7.26%	127	2.12%	$ 2,563,835	5.16%
Assembly, Sales Area	10	3.27	2,500	.07	347	5.80	4,254,882	8.56
Function Area	6	1.96	14,480	.42	1,124	18.77	9,976,020	20.07
Storage Area	84	27.45	1,458,821	42.35	411	6.86	5,394,323	10.85
Service Facilities	3	.98	11,205	.33	177	2.96	754,272	1.52
Service and Equipment Area	14	4.58	360,404	10.46	117	1.95	5,407,129	10.88
Structural Area	13	4.25	85,926	2.49	164	2.74	4,494,979	9.04
Vehicle Area	2	.65	2,500	.07	996	16.64	2,590,633	5.21
Outside Area	159	51.96	734,738	21.33	2,373	39.64	5,172,712	10.41
Undetermined/Unclassified	13	4.25	524,366	15.22	151	2.52	9,095,611	18.30
Total	**306**	**100.00%**	**$ 3,444,940**	**100.00%**	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 11

Breakdown of Act or Omission by Property Classification, 1987

Act or Omission	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fire	47	47.48%	$ 5,540,742	81.67%	9	20.45%	$ 4,400	15.95%
Misuse of Source of Ignition	7	7.07	20,657	.30	14	31.82	5,786	20.97
Misuse of Material Ignited	2	2.02	—	—	—	—	—	—
Mechanical, Electrical Failure, Malfunction	17	17.17	457,655	6.74	10	22.73	11,450	41.51
Construction, Design or Installation Deficiency	1	1.01	1,553	.02	—	—	—	—
Misuse of Equipment	—	—	—	—	—	—	—	—
Human Failing	10	10.10	23,723	.35	7	15.91	550	1.99
Vehicle Accident	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—
Undetermined/Not Applicable	15	15.15	741,155	10.92	4	9.09	5,400	19.58
Total	**99**	**100.00%**	**$ 6,785,485**	**100.00%**	**44**	**100.00%**	**$ 27,586**	**100.00%**

Table No. 11(a)

Breakdown of Act or Omission by Property Classification, 1987

Act or Omission	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fire	147	7.58%	$ 5,144,107	24.55%	6	27.27%	$ 26,950	5.98%
Misuse of Source of Ignition	375	19.33	2,861,836	13.65	4	18.18	4,050	.90
Misuse of Material Ignited	69	3.56	579,697	2.77	2	9.09	62,602	13.90
Mechanical, Electrical Failure, Malfunction	386	19.90	3,239,829	15.45	2	9.09	2,400	.53
Construction, Design or Installation Deficiency	38	1.96	489,422	2.33	1	4.55	135,000	29.97
Misuse of Equipment	27	1.39	390,772	1.86	—	—	—	—
Human Failing	625	32.21	2,830,710	13.50	3	13.64	—	—
Vehicle Accident	—	—	—	—	—	—	—	—
Unclassified	111	5.72	1,582,423	7.55	—	—	—	—
Undetermined/Not Applicable	162	8.35	3,844,775	18.34	4	18.18	219,381	48.72
Total	**1,940**	**100.00%**	**$20,963,571**	**100.00%**	**22**	**100.00%**	**$ 450,383**	**100.00%**

Table No. 11(b)

Breakdown of Act or Omission by Property Classification, 1987

Act or Omission	Mercantile No.	Mercantile Percent	Mercantile Amount	Mercantile Percent	Industrial Manufacturing Properties No.	Industrial Manufacturing Properties Percent	Industrial Manufacturing Properties Amount	Industrial Manufacturing Properties Percent
Incendiary or Set Fire	18	27.69%	$ 1,554,859	37.66%	7	8.86%	$ 382,336	8.50%
Misuse of Source of Ignition	8	12.31	173,100	4.19	5	6.33	5,400	.12
Misuse of Material Ignited	4	6.15	2,500	.06	4	5.06	1,512,700	33.61
Mechanical, Electrical Failure, Malfunction	19	29.23	261,860	6.34	33	41.78	1,709,532	37.98
Construction, Design or Installation Deficiency	—	—	—	—	—	—	—	—
Misuse of Equipment	—	—	—	—	3	3.80	82,000	1.82
Human Failing	2	3.08	116,320	2.82	7	8.86	1,770	.04
Vehicle Accident	—	—	—	—	—	—	—	—
Unclassified	3	4.62	1,200	.03	6	7.59	52,500	1.17
Undetermined/Not Applicable	11	16.92	2,018,670	48.90	14	17.72	754,049	16.76
Total	**65**	**100.00%**	**$ 4,128,509**	**100.00%**	**79**	**100.00%**	**$ 4,500,287**	**100.00%**

Table No. 11(c)

Breakdown of Act or Omission by Property Classification, 1987

Act or Omission	Industrial Storage Properties No.	Industrial Storage Properties Percent	Industrial Storage Properties Amount	Industrial Storage Properties Percent	Special Property - Transportation Equipment No.	Special Property - Transportation Equipment Percent	Special Property - Transportation Equipment Amount	Special Property - Transportation Equipment Percent
Incendiary or Set Fire	74	36.28%	$ 1,458,896	37.88%	1,381	42.77%	$ 1,346,168	24.25%
Misuse of Source of Ignition	22	10.78	163,689	4.25	443	13.72	930,588	16.76
Misuse of Material Ignited	11	5.39	1,564,432	40.63	38	1.18	225,376	4.06
Mechanical, Electrical Failure, Malfunction	24	11.76	160,685	4.17	281	8.71	672,999	12.12
Construction, Design or Installation Deficiency	7	3.43	82,100	2.13	8	.25	26,545	.48
Misuse of Equipment	1	.49	20,000	.52	7	.22	79,247	1.43
Human Failing	11	5.39	12,100	.31	52	1.61	78,116	1.41
Vehicle Accident	—	—	—	—	17	.53	13,998	.25
Unclassified	4	1.96	74,679	1.94	68	2.11	261,969	4.72
Undetermined/Not Applicable	50	24.52	314,829	8.17	933	28.90	1,917,219	34.52
Total	**204**	**100.00%**	**$ 3,851,410**	**100.00%**	**3,228**	**100.00%**	**$ 5,552,225**	**100.00%**

Table No. 11(d)

Breakdown of Act or Omission by Property Classification, 1987

Act or Omission	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Incendiary or Set Fire	65	21.24%	$ 301,234	8.74%	1,754	29.30%	$15,759,692	31.71%
Misuse of Source of Ignition	62	20.26	421,845	12.25	940	15.70	4,586,951	9.23
Misuse of Material Ignited	13	4.25	66,125	1.92	143	2.39	4,013,432	8.07
Mechanical, Electrical Failure, Malfunction	58	18.95	1,183,906	34.37	830	13.86	7,700,316	15.49
Construction, Design or Installation Deficiency	4	1.31	58,775	1.71	59	.99	793,395	1.60
Misuse of Equipment	1	.33	3,915	.11	39	.65	575,934	1.16
Human Failing	13	4.25	31,350	.91	730	12.19	3,094,639	6.23
Vehicle Accident	1	.33	—	—	18	.30	13,998	.03
Unclassified	17	5.56	87,061	2.53	209	3.49	2,059,832	4.14
Undetermined/Not Applicable	72	23.52	1,290,729	37.46	1,265	21.13	11,106,207	22.34
Total	**306**	**100.00%**	**$ 3,444,940**	**100.00%**	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 12

Breakdown of Source of Heat of Ignition by Property Classification, 1987

Source of Heat of Ignition	Assembly No.	Assembly Percent	Assembly Amount	Assembly Percent	Institutional No.	Institutional Percent	Institutional Amount	Institutional Percent
Electrical Distribution Equipment-Aluminum	—	—%	$ —	—%	—	—%	$ —	—%
Heating Equipment	7	7.07	319,544	4.71	2	4.55	10,000	36.25
Cooking Equipment	14	14.14	43,885	.65	6	13.64	350	1.27
Smoker's Material	4	4.04	11,132	.16	13	29.54	5,286	19.16
Electrical Distribution Equipment-Copper	6	6.06	76,103	1.12	2	4.55	400	1.45
Electrical Appliance and Equipment	3	3.03	1,058	.02	1	2.27	700	2.54
Other Appliance and Equipment	2	2.02	41,738	.62	4	9.09	550	1.99
Open Flame	47	47.48	1,390,047	20.49	12	27.27	4,900	17.76
Exposure	1	1.01	5,000	.07	—	—	—	—
Miscellaneous	1	1.01	4,000,000	58.94	—	—	—	—
Undetermined/Unclassified	14	14.14	896,978	13.22	4	9.09	5,400	19.58
Total	**99**	**100.00%**	**$ 6,785,485**	**100.00%**	**44**	**100.00%**	**$ 27,586**	**100.00%**

Table No. 12(a)

Breakdown of Source of Heat of Ignition by Property Classification, 1987

Source of Heat of Ignition	Residential No.	Residential Percent	Residential Amount	Residential Percent	Business and Personal Services No.	Business and Personal Services Percent	Business and Personal Services Amount	Business and Personal Services Percent
Electrical Distribution Equipment-Aluminum	1	.05%	$ 790	—%	—	—%	$ —	—%
Heating Equipment	281	14.48	2,013,179	9.60	2	9.09	62,102	13.79
Cooking Equipment	594	30.62	2,499,706	11.92	2	9.09	—	—
Smoker's Material	267	13.76	1,928,928	9.20	4	18.18	3,050	.68
Electrical Distribution Equipment-Copper	105	5.41	1,941,386	9.26	1	4.55	2,200	.49
Electrical Appliance and Equipment	76	3.92	365,430	1.74	3	13.64	135,700	30.13
Other Appliance and Equipment	72	3.71	332,811	1.59	—	—	—	—
Open Flame	275	14.18	3,846,184	18.35	6	27 27	27,950	6.21
Exposure	75	3.87	1,509,572	7.20	2	9.09	73,381	16.29
Miscellaneous	55	2.84	352,212	1.68	—	—	—	—
Undetermined/Unclassified	139	7.16	6,173,373	29.46	2	9.09	146,000	32.41
Total	**1,940**	**100.00%**	**$20,963,571**	**100.00%**	**22**	**100.00%**	**$ 450,383**	**100.00%**

Table No. 12(b)

Breakdown of Source of Heat of Ignition by Property Classification, 1987

Source of Heat of Ignition	Mercantile No.	Mercantile Percent	Mercantile Amount	Mercantile Percent	Industrial Manufacturing Properties No.	Industrial Manufacturing Properties Percent	Industrial Manufacturing Properties Amount	Industrial Manufacturing Properties Percent
Electrical Distribution Equipment-Aluminum	—	—%	$ —	—%	—	—%	$ —	—%
Heating Equipment	3	4.62	2,800	.07	6	7.59	112,700	2.50
Cooking Equipment	2	3.08	5,500	.13	7	8.86	36,396	.81
Smoker's Material	2	3.08	45,100	1.09	—	—	—	—
Electrical Distribution Equipment-Copper	10	15.38	219,441	5.32	11	13.92	1,592,300	35.39
Electrical Appliance and Equipment	6	9.23	89,012	2.16	7	8.86	17,286	.38
Other Appliance and Equipment	4	6.15	31,007	.75	7	8.86	121,070	2.69
Open Flame	22	33.84	1,531,336	37.09	12	15.19	69,436	1.54
Exposure	6	9.23	662,375	16.04	1	1.27	265,000	5.89
Miscellaneous	1	1.54	400	.01	18	22.79	1,504,685	33.44
Undetermined/Unclassified	9	13.85	1,541,538	37.34	10	12.66	781,414	17.36
Total	**65**	**100.00%**	**$ 4,128,509**	**100.00%**	**79**	**100.00%**	**$ 4,500,287**	**100.00%**

Table No. 12(c)

Breakdown of Source of Heat of Ignition by Property Classification, 1987

Source of Heat of Ignition	Industrial Storage Properties No.	Industrial Storage Properties Percent	Industrial Storage Properties Amount	Industrial Storage Properties Percent	Special Property - Transportation Equipment No.	Special Property - Transportation Equipment Percent	Special Property - Transportation Equipment Amount	Special Property - Transportation Equipment Percent
Electrical Distribution Equipment-Aluminum	—	—%	$ —	—%	1	.03%	$ —	—%
Heating Equipment	16	7.84	1,525,182	39.60	19	.59	173,820	3.13
Cooking Equipment	—	—	—	—	44	1.36	24,020	.43
Smoker's Material	5	2.45	38,073	.99	42	1.30	125,775	2.27
Electrical Distribution Equipment-Copper	10	4.90	99,713	2.59	111	3.44	344,442	6.20
Electrical Appliance and Equipment	7	3.43	22,199	.58	11	.34	23,029	.41
Other Appliance and Equipment	5	2.45	22,800	.59	177	5.48	374,299	6.74
Open Flame	85	41.68	1,319,228	34.25	1,763	54.62	1,644,723	29.62
Exposure	11	5.39	47,819	1.24	61	1.89	218,692	3.94
Miscellaneous	11	5.39	244,917	6.36	48	1.49	327,013	5.89
Undetermined/Unclassified	54	26.47	531,479	13.80	951	29.46	2,296,412	41.37
Total	**204**	**100.00%**	**$ 3,851,410**	**100.00%**	**3,228**	**100.00%**	**$ 5,552,225**	**100.00%**

Table No. 12(d)

Breakdown of Source of Heat of Ignition by Property Classification, 1987

Source of Heat of Ignition	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Electrical Distribution Equipment-Aluminum	1	.33%	$ 200	.01%	3	.05%	$ 990	—%
Heating Equipment	16	5.23	153,124	4.44	352	5.88	4,372,451	8.80
Cooking Equipment	1	.33	500	.01	670	11.19	2,610,357	5.25
Smoker's Material	2	.65	8,749	.25	339	5.66	2,166,093	4.36
Electrical Distribution Equipment-Copper	43	14.05	1,117,062	32.43	299	4.99	5,393,047	10.85
Electrical Appliance and Equipment	10	3.27	28,525	.83	124	2.07	682,939	1.37
Other Appliance and Equipment	5	1.63	20,415	.59	276	4.61	944,690	1.90
Open Flame	116	37.91	563,343	16.35	2,338	39.06	10,397,147	20.92
Exposure	15	4.90	12,250	.36	172	2.87	2,794,089	5.62
Miscellaneous	22	7.19	98,756	2.87	156	2.61	6,527,983	13.13
Undetermined/Unclassified	75	24.51	1,442,016	41.86	1,258	21.01	13,814,610	27.80
Total	**306**	**100.00%**	**$ 3,444,940**	**100.00%**	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 13

Breakdown of Fuel or Energy by Property Classification, 1987

Fuel or Energy	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Coal, Wood	3	3.03%	$ 9,550	.14%	4	9.09%	$ 600	2.18%
Fuel Oil	2	2.02	300	—	—	—	—	—
Gasoline	—	—	—	—	—	—	—	—
Natural Gas	6	6.06	34,833	.51	2	4.55	10,000	36.25
Propane	5	5.05	860,928	12.69	1	2.27	—	—
Smoker's Material	4	4.04	11,132	.16	13	29.55	5,286	19.16
Electricity	19	19.19	442,462	6.52	12	27.27	2,000	7.25
Lightning	—	—	—	—	—	—	—	—
Unclassified	2	2.02	4,483	.07	—	—	—	—
Undetermined/ Not Applicable	58	58.59	5,421,797	79.91	12	27.27	9,700	35.16
Total	**99**	**100.00%**	**$ 6,785,485**	**100.00%**	**44**	**100.00%**	**$ 27,586**	**100.00%**

Table No. 13(a)

Breakdown of Fuel or Energy by Property Classification, 1987

Fuel or Energy	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Coal, Wood	294	15.15%	$ 2,016,038	9.62%	—	—%	$ —	—%
Fuel Oil	16	.82	62,262	.30	—	—	—	—
Gasoline	3	.15	3,100	.01	—	—	—	—
Natural Gas	18	.93	137,361	.66	—	—	—	—
Propane	64	3.30	693,978	3.31	1	4.55	1,000	.22
Smoker's Material	272	14.02	1,958,778	9.34	4	18.18	3,050	.68
Electricity	726	37.43	4,986,247	23.79	7	31.82	137,900	30.62
Lightning	97	5.00	1,574,002	7.51	—	—	—	—
Unclassified	31	1.60	47,830	.23	1	4.55	62,102	13.79
Undetermined/ Not Applicable	419	21.60	9,483,975	45.23	9	40.90	246,331	54.69
Total	**1,940**	**100.00%**	**$20,963,571**	**100.00%**	**22**	**100.00%**	**$ 450,383**	**100.00%**

Table No. 13(b)

Breakdown of Fuel or Energy by Property Classification, 1987

Fuel or Energy	Mercantile				Industrial Manufacturing Properties			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Coal, Wood	2	3.08%	$ 2,500	.06%	6	7.59%	$ 11,200	.25%
Fuel Oil	1	1.54	—	—	1	1.27	2,000	.04
Gasoline	1	1.54	1,500	.04	—	—	—	—
Natural Gas	1	1.54	5,500	.13	11	13.92	193,596	4.30
Propane	1	1.54	185,000	4.48	3	3.80	52,800	1.17
Smoker's Material	2	3.08	45,100	1.09	—	—	—	—
Electricity	23	35.38	473,680	11.47	29	36.71	1,662,106	36.94
Lightning	1	1.54	400	.01	—	—	—	—
Unclassified	3	4.62	72,000	1.74	1	1.27	1,435,000	31.89
Undetermined/ Not Applicable	30	46.14	3,342,829	80.98	28	35.44	1,143,585	25.41
Total	**65**	**100.00%**	**$ 4,128,509**	**100.00%**	**79**	**100.00%**	**$ 4,500,287**	**100.00%**

Table No. 13(c)

Breakdown of Fuel or Energy by Property Classification, 1987

Fuel or Energy	Industrial Storage Properties				Special Property - Transportation Equipment			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Coal, Wood	25	12.25%	$ 110,009	2.86%	233	7.22%	$ 249,199	4.49%
Fuel Oil	2	.98	25,075	.65	44	1.36	118,925	2.14
Gasoline	6	2.94	28,699	.75	153	4.74	401,487	7.23
Natural Gas	—	—	—	—	3	.09	1,564	.03
Propane	3	1.47	1,446,533	37.56	65	2.01	124,830	2.25
Smoker's Material	5	2.45	38,073	.99	48	1.49	63,475	1.14
Electricity	27	13.24	161,213	4.19	114	3.53	339,853	6.12
Lightning	2	.98	52,780	1.37	13	.40	86,175	1.55
Unclassified	5	2.45	156,400	4.06	67	2.08	187,072	3.37
Undetermined/ Not Applicable	129	63.24	1,832,628	47.57	2,488	77.08	3,979,645	71.68
Total	**204**	**100.00%**	**$ 3,851,410**	**100.00%**	**3,228**	**100.00%**	**$ 5,552,225**	**100.00%**

Table No. 13(d)

Breakdown of Fuel or Energy by Property Classification, 1987

Fuel or Energy	Miscellaneous Properties				Totals of All Property Classifications			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Coal, Wood	44	14.38%	$ 82,969	2.41%	611	10.21%	$ 2,482,065	4.99%
Fuel Oil	3	.98	41,379	1.20	69	1.15	249,941	.50
Gasoline	4	1.31	6,000	.17	167	2.79	440,786	.89
Natural Gas	1	.33	30,000	.87	42	.70	412,854	.83
Propane	4	1.31	53,775	1.56	147	2.46	3,418,844	6.88
Smoker's Material	3	.98	14,749	.43	351	5.86	2,139,643	4.30
Electricity	57	18.63	1,178,356	34.21	1,014	16.94	9,383,817	18.88
Lightning	13	4.25	54,556	1.58	126	2.10	1,767,913	3.56
Unclassified	15	4.90	190,107	5.52	125	2.09	2,154,994	4.34
Undetermined/ Not Applicable	162	52.93	1,793,049	52.05	3,335	55.70	27,253,539	54.83
Total	**306**	**100.00%**	**$ 3,444,940**	**100.00%**	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 14

Breakdown of Material First Ignited by Property Classification, 1987

Material First Ignited	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Component, Finish Material	7	7.07%	$ 320,036	4.72%	1	2.27%	$ —	—%
Furniture, Furnishing	2	2.02	300	—	12	27.27	10,086	36.55
Clothing, Textile	2	2.02	100	—	6	13.64	5,500	19.94
Wood, Paper Product	19	19.19	865,623	12.76	4	9.09	200	.73
Flammable Liquid	17	17.17	121,033	1.78	3	6.82	—	—
Flammable Gas	2	2.02	13,340	.20	1	2.27	10,000	36.25
Chemical	1	1.01	928	.01	1	2.27	—	—
Agricultural, Forest Product	—	—	—	—	1	2.27	—	—
Miscellaneous	24	24.24	4,080,907	60.15	15	34.10	1,800	6.53
Undetermined/Unclassified	25	25.26	1,383,218	20.38	—	—	—	—
Total	**99**	**100.00%**	**$ 6,785,485**	**100.00%**	**44**	**100.00%**	**$ 27,586**	**100.00%**

Table No. 14(a)

Breakdown of Material First Ignited by Property Classification, 1987

Material First Ignited	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Component, Finish Material	308	15.88%	$ 2,215,844	10.57%	4	18.18%	$ 141,200	31.35%
Furniture, Furnishing	369	19.02	2,524,968	12.04	2	9.09	550	.12
Clothing, Textile	73	3.76	429,369	2.05	—	—	—	—
Wood, Paper Product	136	7.01	1,010,482	4.82	7	31.81	26,850	5.96
Flammable Liquid	395	20.36	2,253,120	10.75	1	4.55	—	—
Flammable Gas	11	.57	37,479	.18	1	4.55	62,102	13.79
Chemical	31	1.60	74,741	.36	—	—	—	—
Agricultural, Forest Product	74	3.81	1,369,437	6.53	—	—	—	—
Miscellaneous	316	16.29	1,673,635	7.98	4	18.18	300	.07
Undetermined/Unclassified	227	11.70	9,374,496	44.72	3	13.64	219,381	48.71
Total	**1,940**	**100.00%**	**$20,963,571**	**100.00%**	**22**	**100.00%**	**$ 450,383**	**100.00%**

Table No. 14(b)

Breakdown of Material First Ignited by Property Classification, 1987

Material First Ignited	Mercantile				Industrial Manufacturing Properties			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Component, Finish Material	5	7.69%	$ 26,560	.64%	8	10.13%	$ 75,286	1.67%
Furniture, Furnishing	1	1.54	1,700	.04	—	—	—	—
Clothing, Textile	4	6.15	8,913	.22	7	8.86	18,505	.41
Wood, Paper Product	11	16.92	1,268,273	30.72	10	12.66	1,517,900	33.73
Flammable Liquid	10	15.38	350,320	8.49	7	8.86	38,200	.85
Flammable Gas	1	1.54	77,000	1.87	1	1.27	30,000	.67
Chemical	2	3.08	—	—	6	7.59	24,250	.54
Agricultural, Forest Product	1	1.54	500	.01	5	6.33	50,896	1.13
Miscellaneous	18	27.70	1,010,015	24.46	24	30.38	464,814	10.33
Undetermined/Unclassified	12	18.46	1,385,228	33.55	11	13.92	2,280,436	50.67
Total	**65**	**100.00%**	**$ 4,128,509**	**100.00%**	**79**	**100.00%**	**$ 4,500,287**	**100.00%**

Table No. 14(c)

Breakdown of Material First Ignited by Property Classification, 1987

Material First Ignited	Industrial Storage Properties				Special Property - Transportation Equipment			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Component, Finish Material	22	10.78%	$ 86,238	2.24%	25	.77%	$ 150,632	2.71%
Furniture Furnishing	6	2.94	10,693	.28	35	1.08	55,350	1.00
Clothing, Textile	4	1.96	2,050	.05	17	.53	13,195	.24
Wood, Paper Product	17	8.33	83,591	2.17	119	3.69	469,673	8.46
Flammable Liquid	17	8.33	227,867	5.92	171	5.30	473,329	8.53
Flammable Gas	1	.49	1,439,548	37.38	48	1.49	20,379	.37
Chemical	4	1.96	9,480	.25	22	.68	2,663	.05
Agricultural, Forest Product	13	6.37	210,640	5.47	838	25.96	1,064,259	19.16
Miscellaneous	29	14.22	81,299	2.11	1,204	37.30	606,255	10.92
Undetermined/Unclassified	91	44.62	1,700,004	44.13	749	23.20	2,696,490	48.56
Total	**204**	**100.00%**	**$ 3,851,410**	**100.00%**	**3,228**	**100.00%**	**$ 5,552,225**	**100.00%**

Table No. 14(d)

Breakdown of Material First Ignited by Property Classification, 1987

Material First Ignited	Miscellaneous Properties No.	Percent	Amount	Percent	Total of All Property Classifications No.	Percent	Amount	Percent
Structural Component, Finish Material	21	6.86%	$ 353,977	10.28%	401	6.70%	$ 3,369,773	6.78%
Furniture, Furnishing	1	.33	—	—	428	7.15	2,603,647	5.24
Clothing, Textile	2	.65	1,449	.04	115	1.92	479,081	.96
Wood, Paper Product	31	10.13	26,940	.78	354	5.91	5,269,532	10.60
Flammable Liquid	4	1.31	10,079	.29	625	10.44	3,473,948	6.99
Flammable Gas	5	1.63	83,275	2.42	71	1.19	1,773,123	3.57
Chemical	1	.33	—	—	68	1.14	112,062	.23
Agricultural, Forest Product	117	38.23	377,495	10.96	1,049	17.52	3,073,227	6.18
Miscellaneous	39	12.75	65,814	1.91	1,673	27.94	7,984,839	16.06
Undetermined/Unclassified	85	27.78	2,525,911	73.32	1,203	20.09	21,565,164	43.39
Total	**306**	**100.00%**	**$ 3,444,940**	**100.00%**	**5,987**	**100.00%**	**$49,704,396**	**100.00%**

Table No. 15

Number of Fires and Amount of Fire Loss by Community or Area, 1987

Municipal Code	Name	Number of Fires	Amount of Loss
001	R.M. of Albert	4	$ 5,417
002	Town of Altona	10	9,155
003	Village of Arborg	2	5,000
004	R.M. of Archie	3	7,283
005	R.M. of Argyle	5	10,150
006	R.M. of Arthur	8	62,142
010	Town of Beausejour	11	308,967
011	Village of Benito	2	1,200
012	R.M. of Bifrost	13	216,022
013	Village of Binscarth	2	35,000
014	R.M. of Birtle	12	50,260
015	Town of Birtle	1	1,104
016	R.M. of Blanshard	8	925,909
017	Town of Boissevain	2	5,569
018	R.M. of Boulton	3	12,500
020	City of Brandon	213	558,881
021	R.M. of Brenda	1	1,095
022	R.M. of Brokenhead	30	258,314
023	Government Services	2	—
026	R.M. of Cameron	3	2,214
027	Town of Carberry	1	900
028	Town of Carman	2	85,000
029	R.M. of Cartier	22	69,158
032	R.M. of Clanwilliam	4	27,189
033	R.M. of Coldwell	5	24,132
034	R.M. of Cornwallis	22	26,290
035	Village of Crystal City	1	600
038	R.M. of Daly	5	23,376
039	R.M. of Dauphin	22	181,948
040	Town of Dauphin	22	193,061
041	Town of Deloraine	1	6,800
042	R.M. of De Salaberry	11	131,509
043	R.M. of Dufferin	8	94,703
045	Village of Darlingford	1	318
048	R.M. of East St. Paul	21	38,326
049	R.M. of Edward	4	41,660
050	Village of Elkhorn	3	4,731
052	R.M. of Elton	16	123,151
053	Town of Emerson	3	5,850
054	Village of Erickson	1	—
055	R.M. of Eriksdale	5	7,150
056	R.M. of Ethelbert	12	32,500
057	Village of Ethelbert	4	426,150
059	Village of Fannystelle	2	47,656
060	City of Flin Flon	34	204,452
063	R.M. of Franklin	31	233,769
066	Village of Garson	1	571
067	R.M. of Gilbert Plains	10	35,500
068	Village of Gilbert Plains	2	13,500
069	R.M. of Gimli	14	140,401
070	Town of Gimli	5	89,340

Table No. 15 (continued)

Number of Fires and Amount of Fire Loss by Community or Area, 1987

Municipal Code	Name	Number of Fires	Amount of Loss
071	Town of Gladstone	3	$ 6,985
072	Village of Glenboro	2	37,487
073	R.M. of Glenella	4	6,929
074	R.M. of Glenwood	2	2,483
075	R.M. of Grandview	9	11,000
076	Town of Grandview	1	4,837
077	Village of Grand Marais	1	1,300
078	Village of Gretna	3	32,327
079	R.M. of Grey	14	31,716
082	R.M. of Hamiota	4	40,650
084	R.M. of Hanover	48	277,447
085	R.M. of Harrison	1	150
087	R.M. of Hillsburg	3	1,742
090	Town of Killarney	13	23,600
092	Village of La Riviere	1	100
093	R.M. of La Broquerie	6	149,492
094	R.M. of Lac du Bonnet	19	232,408
095	Village of Lac du Bonnet	2	1,694
097	R.M. of Langford	6	1,000
099	R.M. of Lawrence	3	32,500
100	R.M. of Lorne	10	16,313
101	R.M. of Louise	4	19,400
102	Village of Lowe Farm	3	2,200
104	R.M. of MacDonald	32	314,006
105	Village of MacGregor	1	5,000
106	Village of Manitou	1	698
107	R.M. of McCreary	1	18,981
111	Town of Melita	5	11,351
112	R.M. of Miniota	12	3,113
113	R.M. of Minitonas	7	59,200
115	Town of Minnedosa	3	130,250
116	R.M. of Minto	2	—
117	R.M. of Montcalm	6	170,400
118	Town of Morden	19	50,157
119	R.M. of Morris	17	76,182
120	Town of Morris	5	8,047
121	R.M. of Morton	8	16,892
122	R.M. of Mossey River	4	1,500
123	U.V.D. of Newdale	1	—
124	Village of Napinka	1	6,000
125	Town of Neepawa	7	8,991
126	Village of Niverville	8	103,950
127	R.M. of North Cypress	13	229,796
129	R.M. of North Norfolk	9	484,600
133	Town of Oak Lake	2	300
134	R.M. of Oakland	6	828
135	R.M. of Ochre River	6	15,410
136	R.M. of Odanah	2	4,500
137	Village of Onanole	1	27,000
140	R.M. of Pembina	10	208,372

Table No. 15 (continued)

Number of Fires and Amount of Fire Loss by Community or Area, 1987

Municipal Code	Name	Number of Fires	Amount of Loss
141	Village of Pilot Mound	1	$ 19,514
142	R.M. of Pipestone	10	129,367
143	Village of Plum Coulee	1	300
144	R.M. of Portage la Prairie	16	422,824
145	City of Portage la Prairie	25	536,040
149	Town of Rapid City	1	2,000
150	R.M. of Rhineland	16	272,147
151	R.M. of Ritchot	15	221,673
152	Town of Rivers	2	17,160
153	R.M. of Riverside	1	3,500
154	Village of Riverton	3	750,000
155	R.M. of Roblin	2	140,200
156	Town of Roblin	5	5,442
157	R.M. of Rockwood	37	340,614
158	R.M. of Roland	4	2,864
159	R.M. of Rosedale	5	29,853
161	Village of Rossburn	1	500
162	R.M. of Rosser	26	226,684
163	R.M. of Russell	2	15,000
164	Town of Russell	2	67,000
165	Village of Richer	1	1,553
166	Village of Rosenort	1	—
167	R.M. of St. Andrews	28	198,100
168	R.M. of Ste. Anne	11	654,183
169	Village of Ste. Anne	5	6,100
170	Village of Swan Lake	2	116,320
171	Village of St. Claude	2	11,000
172	R.M. of St. Clements	18	152,227
173	R.M. of St. Francois Xavier	6	38,000
174	Village of St. Malo	5	41,200
175	R.M. of St. Laurent	7	11,960
177	Village of St. Pierre Jolys	5	9,200
178	R.M. of Ste. Rose	12	47,486
179	Village of Ste. Rose du Lac	3	135,000
180	U.V.D. of Sprague	3	14,264
181	Village of Sandy Lake	2	400
182	R.M. of Saskatchewan	4	63,756
183	Town of Selkirk	42	201,491
184	R.M. of Shellmouth	4	250
185	R.M. of Shell River	13	35,720
186	R.M. of Shoal Lake	8	66,447
187	Village of Shoal Lake	3	32,789
188	R.M. of Sifton	13	24,603
189	R.M. of Siglunes	2	54,026
190	R.M. of Silver Creek	2	18,850
192	Town of Souris	4	52,381
193	R.M. of South Cypress	15	25,651
194	R.M. of South Norfolk	1	15,000
195	R.M. of Springfield	78	772,915
196	R.M. of Stanley	31	141,046

Table No. 15 (continued)

Number of Fires and Amount of Fire Loss by Community or Area, 1987

Municipal Code	Name	Number of Fires	Amount of Loss
197	Town of Steinbach	39	$ 167,012
198	Town of Stonewall	10	63,440
199	R.M. of Strathclair	2	1,838
200	R.M. of Strathcona	5	10,600
201	R.M. of Swan River	17	20,950
202	Town of Swan River	15	119,066
203	Village of Stony Mountain	5	3,811
204	Village of Sperling	1	500
205	R.M. of Tache	14	196,431
206	Village of Teulon	1	235
207	Town of The Pas	42	636,322
208	R.M. of Thompson	9	345,960
209	City of Thompson	111	335,585
211	Village of Treherne	2	78,000
212	R.M. of Turtle Mountain	18	13,863
216	R.M. of Victoria	6	71,455
217	R.M. of Victoria Beach	3	40,994
218	Town of Virden	11	5,235
221	R.M. of Wallace	28	89,868
222	Village of Waskada	3	26,209
223	Village of Wawanesa	2	6,858
224	R.M. of Westbourne	14	33,295
226	R.M. of West St. Paul	32	170,500
227	R.M. of Whitehead	1	—
228	R.M. of Whitemouth	20	152,322
229	R.M. of Whitewater	4	54,647
230	R.M. of Winchester	3	—
231	Town of Winkler	24	209,681
232	City of Winnipeg	3,570	25,856,790
233	Town of Winnipeg Beach	13	85,856
234	Village of Winnipegosis	5	154,200
235	R.M. of Woodlands	11	319,706
236	R.M. of Woodworth	1	378
237	Community of Warren	1	5,000
238	L.G.D. of Alexander	28	124,722
240	L.G.D. of Alonsa	9	89,446
242	L.G.D. of Armstrong	21	79,822
244	L.G.D. of Churchill	8	270,600
246	L.G.D. of Consol	6	188,374
248	L.G.D. of Fisher	19	18,453
250	L.G.D. of Gillam	11	115,186
252	L.G.D. of Grahamdale	18	102,563
255	Bissett	2	—
256	Town of Leaf Rapids	2	3,000
259	Stevenson Island	1	—
260	L.G.D. of Mountain	10	155,200
262	L.G.D. of Mystery Lake	1	—
264	L.G.D. of Park	5	20,668
266	L.G.D. of Pinawa	9	32,254
268	L.G.D. of Piney	17	501,660

Table No. 15 (continued)

Number of Fires and Amount of Fire Loss by Community or Area, 1987

Municipal Code	Name	Number of Fires	Amount of Loss
270	L.G.D. of Reynolds	7	$ 158,466
271	Cross Lake	2	46,000
272	Town of Snow Lake	13	79,305
273	Dakota Ojibway Tribal Council	16	200,540
274	L.G.D. of Stuartburn	6	139,650
275	Berens River	32	28,650
276	Wasagaming	1	2,795
277	Waterhen	1	2,350
278	Cranberry Portage	9	32,000
279	Thicket Portage	1	—
280	Pointe du Bois	1	3,000
282	Crane River	1	70,000
283	Easterville	1	—
286	Matheson Island	1	9,420
291	Duck Bay	12	800
292	Barrows/Red Deer Lake	2	—
294	Camperville	2	7,000
296	Moose Lake	1	20,959
297	Norway House	4	3,000
298	South Indian Lake	2	108,780
299	Wabowden	4	21,000
300	Miscellaneous	90	1,570,859
302	Gods Lake Narrows	1	5,875
305	Homebrook	1	—
315	West Region Tribal Council	4	120,000
316	Interlake Reserves Tribal Council	16	283,505
317	Southeast Resources Affiliation Council	4	71,500
318	Island Lake Tribal Council	2	60,000
319	Keewatin Tribal Council	31	211,200
320	Miscellaneous Indian Reserves	9	82,700
321	Swampy Creek Tribal Council	10	131,730
324	Manfor, The Pas	3	1,435,000
	Total	**5,987**	**$49,704,396**

Table No. 16

Fire Losses Exceeding $500,000., 1987

Date	Location	Occupancy	Reported Cause	Amount of Loss
87 01 18	Winnipeg	Industrial Manufacturing	Undetermined	$ 626,000*
87 01 23	Winnipeg	Industrial Storage	Accidental	1,439,548*
87 04 05	Winnipeg	Apartment	Incendiary	1,316,184*
87 04 15	Winnipeg	School	Undetermined	550,000*
87 04 22	Riverton	Mercantile	Undetermined — suspicious	750,000*
87 05 15	Winnipeg	Apartment	Undetermined — suspicious	2,148,663*
87 06 04	Winnipeg	Mercantile	Undetermined	753,000*
87 07 23	Winnipeg	Industrial Storage	Incendiary	900,000*
87 09 29	Winnipeg	Meat Processing Plant	Electrical	1,200,000*
87 11 14	R.M. Blanshard	Ice Rink	Incendiary	860,000*
87 12 06	Manfor, The Pas	Industrial Manufacturing	Spontaneous combustion	1,435,000*
87 12 27	Winnipeg	Church	Still under investigation	4,000,000*

**Estimated loss*

Section II — Investigation

Table No. 17
Investigations Conducted by Local Police, 1987

Area	Number of Investigations Conducted
Winnipeg Police	180
Urban Police Forces	43
R.C.M.P.	297
Total	**520**

Table No. 18
Findings of Investigations Conducted Under The Fires Prevention Act, 1987

Cause of Fire	Number
Accidental	263
Incendiary	82
Vandalism	37
Undetermined — Accidental	119
— Suspicious	17
Still Under Investigation	2
Total	**520**

Section III — Manitoba Fire Chiefs

List of Fire Chiefs and Fire Departments

Alexander	W.J. Dane
Alonsa	Stan Fashoway
Altona	Ed Klassen
Amaranth	Cecil Phillips
Angusville	Mike Klym
Arborg-Bifrost	Geo. Chyzy
Arden	Dennis Gagnon
Ashern	Matt Baker
Austin	Don Currie
Baldur-Argyle	William Warrener
Barrows	Leon Genaille
Beausejour	Ron F. Nikodem
Belmont	Edward Verhelst
Benito	Ken Schenk
Berens River	Roland Dubien
Big Black River	Raymond Valiquette
Binscarth	Roy Graham
Birch River	Floyd Corbett
Birtle	Gerald Birch
Bissett	Alden Wood
Boissevain	Eric Reichert
Bowsman	Ken Fahrenschon
Brandon	E. Polnick
Brochet	Roderick Thomas
Camperville	George Flamond
Carberry-N. Cypress	R. Alvin Walker
Cardale	Wayne Horne
Carman-Dufferin	Brian Milne
Cartier, R.M.	Roger Gillis
Cartwright-Roblin	Wm. G. Waldie
Churchill	Dick Hunter
Cormorant	Joe Sydor
Cranberry Portage	Walter Queen
Crane River	John Fleury
Cross Lake	Glen Smith
Crystal City	Wm. McKitrick
Cypress River	Brian Laing
Dallas/Red Rose	Vacant
Darlingford	Bob Davidson
Dauphin	Dave Seeley
Dauphin River	Erle Einarson
Deloraine	Wm. Cheyne
Dominion City	Barry Gushuliak
Duck Bay	Vacant
Dunrea	Len Clark
East St. Paul	Ernie Ottenbreit
East Selkirk	Clive Rennie
Easterville	Brian McLeod
Eddystone	Kelly Johnson
Elm Creek	Kermit Olson
Emerson	Stanley Machdanz
Erickson	Dennis Skog
Eriksdale	Harry Grandburg
Ethelbert	Mike Machnicki
Fisher Bay	Vacant
Fisher Branch	John Plett
Flin Flon	Ruben Hagen
Fork River	Ben Bornn
Foxwarren	Don Hodgson
Fraserwood	Steven Maksymyk
Gilbert Plains	Len Pratt
Gillam	Brent Clayton
Gimli	Bert Bouillet
Gladstone	Lyle Cox
Glenboro	Steve Bjornson
Glenella	Fred Lazor
Gods Lake Narrows	Raymond Trout
Grand Marais	Art Carriere
Grand Rapids	Greg King
Grandview	John Yarush
Granville Lake	Geo. MacKenzie
Gretna	John Teichroeb
Grunthal	Abe Friesen
Gypsumville	Murray L. Jackson
Hamiota	Barry Lee
Hartney	R.A. McKenzie
Harwill	Lorne Webb
Haywood	J. Dheilly
Herb Lake Landing	Jim Corman
Holland	Ron Landreville
Homebrook	Ruth Zahorodney
Ilford	Edward Shoup
Inglis	Gerald Gorda
Inwood	Gordon Strick
Kelwood	Andre Aucoin
Kenton	Ivan Crampain
Killarney	C.E. Hartwell
Kleefeld	Abe Martens
La Broquerie	Gilbert Tetrault
Lac du Bonnet	Lloyd Howe
Leaf Rapids	Edward Kozy
Letellier-St. Joseph	Marc P. Lemay
Lorette	R. Desorcy

List of the Fire Chiefs and Fire Departments (continued)

Lorne, R.M.	Peter Sheffield
Lowe Farm	Geo Klassen
Lundar	Ernie Oliver
Lynn Lake	Wayne Doak
MacDonald, R.M.	Alvin R. Murner
MacGregor	Ronald Borton
Mafeking	Melvin Plett
Manigotogan	Charles Simard
Manitou	Frank Gerbrandt
Matheson Island	Don Ladouceur
McAuley	Glendon Patterson
McCreary	Wm. Roncin
Meadow Portage	Ken Spence
Melita	Robert Reddaway
Miami	L. Mansell
Miniota	S.W. Dales
Minitonas	Douglas E. Wagner
Minnedosa	Bill McVey
Moose Lake	H. Comerford
Moosehorn	Michael Kutzy
Morden	Percy Paracholski
Morris	Bill Harder
National Mills	Vacant
Neepawa	Don Evenson
Nelson House	Wayne Spence
Newdale	Don Baker
Ninette	Bob Mason
Niverville	George Dyck
Norway House	Ted Anderson
Notre Dame de Lourdes	Yves Julian
Oak Bank	John Murrell
Oak Lake	Reg Morcombe
Oak River	Vernon Darroch
Oakburn	Graydon Bell
Ochre River	W. Lloyd Freeman
Onanole & District	Dwight McMillan
Pelican Rapids	Gordon Munroe
Pierson	Merv Nicholls
Pikwitonei	Leon Brightnose
Pilot Mound	K.L. Heppner
Pinawa	N.P. Cliche
Pine Falls	Wilfred Kemball
Pine River	Wm. J. Bodnarchuk
Piney	Dale Edbom
Plumas	Ron Curtis
Plum Coulee	Norman Dyck
Pointe du Bois	Gordon Johnson
Portage la Prairie	Albert McDonald
Rapid City	Rick Worth
Red Deer Lake	Faron Cook
Reston	Wm. W. Busby
Richer	Paul Saindon
Rivers	Glen McGuire
Riverton	Raymond Johnson
Roblin	Tom Bowley
Roland	James Moffatt
Rorketon	Leo. L. Hrushowy
Rosedale, R.M.	Matt Skibinsky
Rosenort	Frank Plett
Rossburn	Lorne Johnston
Rosser	Carl Simonson
Russell	Henry Smith
St. Adolphe	Hubert Brodeur
St. Andrews, R.M.	Edwin Carter
St. Claude	Gilbert Pineau
St. Francois Xavier	John Zeemel
St. Jean Baptiste	Norbert Sabourin
St. Laurent	Ed Schon
St. Lazare	Harry Jessop
St. Malo	Denis Maynard
St. Pierre-Jolys	R. Hebert
Ste. Anne	Maurice Chaput
Ste. Rose du Lac	Wm. Ryder
Sandy Lake	Les Lewandoski
Selkirk	Ted Wozny
Seymourville	Ted Seymour
Sherridon	Debi Hatch
Shoal Lake	Graydon Bell
Sifton	Martin Gancher
Snow Flake	Bill Giesbrecht
Snow Lake	David Syms
Somerset	Luc Boulet
Souris	Donald Doherty
South Indian Lake	Steve Ducharme
South Norfolk, R.M.	Eric Allan
Sperling	Wendell J. Fewster
Sprague	Stan Meek
Steinbach	Ert Peters
Stevenson Island	Len Chornaby
Stonewall-Rockwood	Dennis Fright
Stony Mountain-Rockwood	Ted Shinn
Strathclair	Brian Martin
Swan River	Lorne Halliday

List of Fire Chiefs and Fire Departments (continued)

Teulon-Rockwood	Jack Palen
The Pas	Neil Puckett
Thicket Portage	Alvin Brightnose
Thompson	L. Carkener
Treherne	John Jenkinson
Victoria Beach	Robert L. Jonsson
Vita	David Machula
Wabowden	Vern Smith
Wallace and District	Bill Edmonds
Warren-Woodlands	Allan Jones
Wasagaming	Pat Rousseau
Waskada	Kenneth Austin
Waterhen	Allan McCreery
Wawanesa	Mel Roney
West St. Paul	Tom E. Addis
Whitemouth, R.M.	Paul Thomson
Whitewater, R.M.	Grant McGuire
Winkler	John Elias
Winnipeg	Jack Henderson
Winnipeg Beach	Jerry Hykawy
Winnipegosis	C. Bergen